barriers **122** to function as described herein. Suitable valve members **142** include ball-type valve members, diaphragm valve-members, lifting disc-type valve members, in-line valve members, pivoting disc-type valve members (e.g., a disc-type valve member pivoting about a hinge or trunnion), and combinations thereof.

[0065] In the illustrated embodiment, the valve members **142** are disc-type valve members having a generally cylindrical shape. The valve members **142** include spacing members **148** configured to provide a fluid flow channel between the valve member **142** and the body **118** of the absorbent structure **100** when the valve member **142** is in the opened position. Further, in the illustrated embodiment, the valve members **142** are positioned within channels **150** formed in the horizontal walls **128** and the vertical walls **130** of the body **118**. In other suitable embodiments, the valve members **142** may be disposed in any suitable location that enables the fluid barriers **122** to function as described herein.

[0066] The valve members **142** may be coupled to the body **118** of the absorbent structure **100** in any suitable manner that enables the absorbent structure **100** to function as described herein. In one suitable embodiment, for example, one or more valve members **142** are coupled to the body **118** by a biasing member that biases the valve member towards the closed position. In another suitable embodiment, the valve members **142** are "floating" or lifting valve members. That is, the valve members **142** are not coupled to the body **118**. For example, in the embodiment illustrated in FIGS. **6** and **7**, the valve member **142** is not directly coupled to the body **118**, and is free to move in the upstream and downstream directions in response to pressure differentials between the two adjoining fluid reservoirs **120**.

[0067] FIGS. **8** and **9** are cross-sectional views similar to FIGS. **6** and **7** illustrating an alternative valve member **200** coupled to the body **118** of the absorbent structure **100** by biasing members **202**. Each biasing member **202** is coupled to the valve member **200** at a first end, and to the body **118** of the absorbent structure **100** (specifically, a vertical wall **130**) at a second end opposite the first end. The biasing members **202** exert a biasing force on the valve member **200**, thereby biasing the valve member **200** towards the closed position (shown in FIG. **9**). When a sufficient pressure differential exists between the upstream side and the downstream side of the valve member **200**, the biasing members **202** are compressed, and the valve member **200** moves to the opened position (shown in FIG. **8**). As the pressure differential between the upstream side and the downstream side of the valve member **200** decreases, the biasing force provided by the biasing members **202** overcomes the pressure differential, thereby moving the valve member **200** back to the closed position.

[0068] In use, the absorbent structure **100** is deformed by movements of the wearer. For example, the absorbent structure **100** is bent and compressed when the wearer sits on the absorbent structure **100**. FIG. **5**, for example, shows the absorbent structure **100** in a compressed state. As shown in FIG. **5**, when the absorbent structure **100** is deformed, the fluid reservoirs **120** within the region of deformation undergo a change in volume. This change in volume creates pressure differentials between fluid reservoirs **120**. Fluid reservoirs **120** having a positive pressure differential are indicated by "P+" in FIGS. **6** and **7**, and fluid reservoirs **120** having a negative pressure differential are indicated by "P−" in FIGS. **6** and **7**.

[0069] The fluid barriers **122** are configured to permit fluid flow in primarily only one direction in response to pressure differentials between the fluid reservoirs **120**, and thereby distribute fluids throughout the absorbent structure **100**. In FIG. **6**, for example, the fluid reservoir **120** on the upstream side **144** of the fluid barrier **122** has a positive pressure differential resulting from compression of the absorbent structure **100**, and the fluid reservoir **120** on the downstream side **146** has a negative pressure differential. As a result, the fluid barrier **122**, and more specifically, the valve member **142**, is in the opened position. Fluid within the absorbent structure **100** is therefore free to flow from the upstream fluid reservoir **120** to the downstream fluid reservoir **120**. Fluid flow is indicated by the arrows labeled "F" in FIGS. **6** and **7**. As the absorbent structure **100** returns to its original, or uncompressed state, shown in FIG. **4**, the volume of the fluid reservoir **120** on the upstream side increases, thus creating a negative pressure differential in the fluid reservoir **120** on the upstream side. The fluid reservoir **120** on the downstream side has a positive pressure differential relative to the upstream fluid reservoir **120**. As a result, the fluid barrier **122**, and more specifically, the valve member **142**, moves from the opened position to the closed position (shown in FIG. **7**). Fluid flow is thereby restricted from the fluid reservoir **120** on the downstream side **146** of the fluid barrier **122** to the fluid reservoir **120** on the upstream side of the fluid barrier **122**.

[0070] As noted above, the absorbent structure **100** is suitably compressible and conformable. In particular, the absorbent structure **100** (e.g., the body **118** of the absorbent structure **100**) is formed from one or more materials having suitable material properties such that the absorbent structure **100** is sufficiently compressible in the z-direction to enable the fluid barriers **122** to be opened and closed by deformation of the absorbent structure **100**. In one suitable embodiment, for example, the absorbent structure is formed from a material having an elastic modulus at a strain (i.e., percent elongation) of about 20% of between about 50 kilopascals (kPA) and about 350 kPa, more suitably between about 100 kPa and about 200 kPa, and even more suitably, between about 120 kPa and about 180 kPa. In another suitable embodiment, the absorbent structure is formed from a material having an elastic modulus at a strain of about 30% of between about 100 kPA and about 400 kPa, more suitably between about 120 kPa and about 300 kPa, and even more suitably, between about 140 kPa and about 220 kPa. In another suitable embodiment, the absorbent structure is formed from a material having an elastic modulus at a strain of about 50% of between about 150 kPA and about 450 kPa, more suitably between about 200 kPa and about 350 kPa, and even more suitably, between about 220 kPa and about 300 kPa. In another suitable embodiment, the absorbent structure is formed from a material having a Shore A hardness between about 1 and about 60, more suitably between about 10 and about 40, and even more suitably, between about 20 and about 35. As noted above, suitable materials from which the absorbent structure may be formed include suitably resilient, compressible materials, such as low-density polyethylene, rubber-like or elastomeric materials, such as TangoPlus Fullcure® 930 (available from Objet Inc. of Billerica, Mass.), and engineered nano-cellular composites, such as polypropylene-based cellular foams.

[0071] When introducing elements of the present invention or the preferred embodiment(s) thereof, the articles "a", "an", "the", and "said" are intended to mean that there are one or more of the elements. The terms "comprising," "including",